

# Notice of Allowability

Application No.

09/583,245

Examiner

Paul Nguyen-Ba

Applicant(s)

LEE ET AL.

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2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's Amendments and Arguments filed on 8/30/2006.
2. ☒ The allowed claim(s) is/are 1 and 3-13, now renumbered 1-12 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 11/13/06.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Heather R. Herndon  
Supervisory Patent Examiner  
Technology Center 2100

**EXAMINER'S AMENDMENT / REASONS FOR ALLOWANCE**

1. Authorization for this examiner's amendment was given in a telephone interview with Charles G. Call on 11/13/2006.

**Claim 3 was dependent upon canceled claim 2. Claim 3 of the application has now been amended to depend upon independent claim 1 as follows:**

3. (currently amended) The method set forth in **claim 1** wherein the data value stored in each of said specified column locations is obtained from a leaf element of said XML document which contains no sub element, and the data values stored in each given one of said specified rows is obtained from an XML element which contains one or more of given ones of said leaf elements, the data values in said given ones of said leaf elements are stored in columns in said given one of specified rows.

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2. The following is an examiner's statement of reasons for allowance:

Applicant's particular method of storing the remainder of said XML document "*in said relational database system*" as an XML skeleton would not have been obvious over, nor would have been fairly suggested by the closest prior art of record.

The closest prior art of record, Krupa (U.S. Patent Application Publication No. 2002/0156811), in view of Jammes (U.S. Patent Application Publication No. 2003/0167213), teach a method for storing an XML document in a relational database system (see Title and Abstract) comprising:

- parsing the character data in said XML document to identify characters representing data values within at least some of the elements of said XML document (see [0014], [0028], and [0029] → Krupa teaches that traversing and mapping includes forming each of the corresponding unique keys as associated hierarchical tree strings);

- storing each of said data values in a specified column location in one or more specified rows of one or more specified tables in said relational database system (see Fig. 2; [0026] → Krupa teaches that relational data is stored as rows of information where each row is uniquely identified by a certain unique key; [0037]-[0046] → i.e., what each column of the table represents; and see generally [0047]-[0110] → "The Storage Algorithm" – creates a new row of data with column assignments),

➤ removing at least some of said characters representing data values from said XML document (see [0046] and [0047] et seq. → Krupa teaches that each data component character representing data values is extracted and stored in its own row of data in the relational database, providing an efficient mechanism for retrieving certain components of the XML document without having to retrieve the whole document itself),

➤ thereafter reconstructing said XML document by merging the data content of said specified rows with said XML skeleton (see [0113] → Krupa teaches an in-memory XML tree can be easily reconstructed by interrogating each data row and creating the appropriate object that corresponds to that row).

Krupa does not explicitly teach storing the remainder of said XML document in said database as an XML skeleton which defines the structure of said XML document and contains the same characters as the XML document but with said characters representing data values omitted.

However, Jammes teaches storing markup language template files (i.e., HTML) wherein the template files define the structure of the markup document but with data values omitted. Information is extracted on-demand from the database and merged with the markup language template files to construct the markup document (see Abstract and paragraphs [0012] and [0061-0071]). Since Krupa and Jammes are both from the same field of endeavor (i.e., both markup languages are descendants of SGML), the motivational purpose of a more efficient means of storing and retrieving

markup documents via a database as disclosed by Jammes would have been recognized in the pertinent art of Krupa.

The closest prior art of record, Krupa, in view of Jammes, however, do not explicitly teach or suggest applicant's particular method of storing the remainder of said XML document "*in said relational database system*" as an XML skeleton. Moreover, the closest prior art fails to anticipate or render Applicant's limitation above obvious.

### ***Conclusion***

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Nguyen-Ba whose telephone number is (571) 272-4094. The examiner can normally be reached on 11 am - 7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on (571) 272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PNB  
11/8/06

  
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